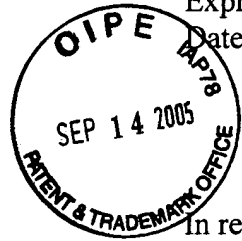Attorney Docket No.: NCR 9517   **PATENT**
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: §
        JAMES E. PRICER   §   Group Art No.   2172
                                 §
Serial No.:   **09/779,866**   §
                                 §
Filed: **February 8, 2001**   §   Examiner: **Bao Tran To**
                                 §
For: **ANALYZING ASSOCIATIONS IN THE**   §
      ORDER OF TRANSACTIONS   §   Attorney Docket No.: **9517**

MAIL STOP APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Dear Sir:

APPELLANT'S REPLY BRIEF (37 C.F.R. § 41.41)

This brief is submitted in response to the Examiner's Answer mailed July 14, 2005. As this Reply Brief is submitted within two months of the Examiner's Answer, this Reply Brief is considered timely filed.

RESPONSE TO THE EXAMINER'S ARGUMENTS

A. The claims should be grouped, if at all, based on the arguments presented in Appellant's Appeal Brief according to 37 C.F.R. 41.32(c)(1).

In the Examiner's Answer dated July 14, 2005 (hereinafter, the Examiner's Answer), the Examiner stated that:

> The rejection of claim 1-20, 22-24, 26 and 27 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.197(c)(7).

Applicant respectfully disagrees. The cited portion of the CFR no longer contains the requirement quoted by the Examiner. *See* 69 Fed. Reg. 49959 (Aug. 12, 2004) (effective Sept. 13, 2004). The replacement rules at Part 41 of the CFR no longer require a Grouping of Claims section in the Appellant's Brief. *See* 37 C.F.R. 41.37(c)(1). Under the new rules at Part 41 of the CFR, grouping of claims is governed by Section 41.37(c)(1)(vii). Applicants respectfully request that their claims be considered based on the arguments provided in the Arguments section of Appellant's Appeal Brief dated April 20, 2005 and that each claim be considered based on its own patentable limitations.

B. The prior art of record does not anticipate or render obvious the claims.

1. Lazarus does not anticipate or render obvious claims 1-20, 22-24, and 26 because Lazarus does not disclose that transactions are grouped into sessions, as required by claims 1-12, 14-27, 29-43, 45-51, and 53.

Claim 1 requires "loading data from the transactions into a database system, where the data include an entry for each transaction **and the transactions are grouped into sessions**." Claim 14 requires "**selecting sessions of transactions belonging to the same group and corresponding to a single session**." Claim 20 requires "load data from the transactions into a database system, where the data includes an entry for each transaction and **the transactions are grouped into sessions**." Likewise, claim 24 requires that "**the transactions are grouped into sessions**." As the specification states, "[i]t may be useful to associate transactions with individual customer 'sessions' in order to allow a meaningful analysis of the transactions." Specification, Page 2, lines 1-2.

The Examiner's Answer states that:

> A. Appellant stated that Lazarus does not discuss

transactions that are grouped into sessions and also gave an example from the specification of US Patent Publication 2002/0143925. This US Pat. Pub. is listed on page 2 lines 4-7 in the present application.

Appellant cited the above US Pat. Pub. as a copending application, not incorporated by reference, thus, the content of this US Pat. Pub., i.e., "After parsing the Web-log data extracting the desires information, the DBMS identifies all Web-log entries associated with a an individual user session (step 315). One the technique from doing so involves identifying all entries that list a single user-ID code and then selecting from these the entries with data-and-time stamps that differ by less than some prescribed amount" is not a part of the specification of the present application. This content is not read into the appealed claims or used as to interpret the claimed limitations. Thus, the claimed transactions are grouped into sessions is not binding to interpretation as appellant proposed. Lazarus discloses a number of transactions in a time interval, or other sequence related criteria, which are read on to grouped into sessions. Therefore, Lazarus anticipates the grouping the transactions into sessions. According to Lazarus, the analysis of consumer spending uses spending data and processes that data are identified co-occurrences of purchases within co-occurrence windows, which may be based on either a number of transactions, a time interval, or other sequence related criteria, columns 3, lines 27 41. Thus, Lazarus teaches the ability to group transactions into a time interval, i.e., session. In addition, Lazarus teaches in col. 28, lines 35-47, that consumer transaction data is organized in groups of observations. Each observation is associated with a selected end-date, i.e., session. The end-date divides the observation into a prediction window and an input window. The input window includes a set of transactions in a defined past time interval prior to the selected end-date (e.g. 6 months prior). Thus, Lazarus anticipates the claimed loading data from the transactions into a database system, where the data includes an entry (identifying entries of spending data) for each transaction and the transactions are grouped into sessions (e.g. 6 months or 3 months).

Examiner's Answer, pages 9-10.

Applicants respectfully disagree with the exclusion of the co-pending application from consideration to show the meaning of "session" to a person of ordinary skill in the art. The cited portions of Lazarus do not use the term "session," while the co-pending application provides a example of a "session." The Examiner has not provided any reference to support the assertion

that the "co-occurrence windows" or "groups of observations" discussed in Lazarus are sessions. Applicants respectfully disagree that the "co-occurrence windows" or "groups of observation" discussed in Lazarus are "sessions" as that term is used in the claims. The cited portions of Lazarus, therefore, do not disclose each limitation of claims 1, 14, 20, and 24.

Each of the dependant claims 2-13, 15-19, 21-23, and 27 depend from one of claims 1, 14, 20, or 24 and include one of the limitations discussed above.

Anticipation can be established only when every element of the claim is disclosed by a single prior art reference. MPEP 2131; *RCA Corp. v. Applied Digital Data Systems, Inc*, 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984). The rejection of claims 1-4, 6, 14-20, and 22 under 35 USC 102(e) should be reversed because Lazarus does not disclose grouping the transactions into sessions.

There is no prima facie case of obviousness where the asserted combination lacks at least one element. MPEP 2143; *In re Vaeck*, 947 F.2d 488, 493, 20 USPQ2d 1438, 1443 (Fed. Cir. 1991). The rejection of claims 5, 7-13, 23-24, and 26-27 under 103(a) should be reversed because Lazarus does not disclose grouping the transactions into sessions.

2. Lazarus does not anticipate or render obvious claims 1-20, 22-24, 26, and 26 because Lazarus does not disclose performing an analysis of the sequence of transactions to find associations in the sequence of transaction in the session, as required by claims 1-12, 14-27, 29-43, 45-51, and 53.

Claims 1 and 14 require "performing an analysis of the sessions of transaction <u>to find associations in the sequence of the transactions in the sessions</u>." Claim 20 requires the computer program to "perform an analysis of the session of transactions <u>to find associations in the sequence of the transactions in the session</u>." Claim 24 requires a database-management component to "perform an analysis of the sessions of transactions <u>to find associations in the sequence of the transactions in the sessions.</u>" This analysis "produces affinity data relating to the order that transactions occur." Specification, Page 12, Lines 6-7. "For example, a web page owner may be interested to know that a customer that clicks on a first image on the web page followed by a second image may be more likely to make a purchase than a customer that clicks on the second image before the first image." Specification, Page 2, Lines 8-12. The Specification further states:

> Associations are relationships between the occurrences of
> one or more items, sometimes called the "antecedent" or "left-

hand-side," in a group of transactions and the occurrences of a different set of one or more items, sometimes called the "consequent" or "right-hand-side," in the same group of transactions. For example, if item A occurs in the first transaction (ITEM_ID="A1") and item B occurs in the second transaction (ITEM-ID="B2") in a large number of groups of transactions, then the association between ITEM-IDs A1 and B2 might be considered significant. In this case, an analyst trying to guide a customer to perform the action corresponding to ITEM_ID B might first guide the customer to perform the action corresponding to ITEM_ID A.

Associations can occur among two or more ordered items. For example, when considering four ordered items, the combinations of ordered items for which associations can be computed include $1 \rightarrow 1$, $2 \rightarrow 1$, $2 \rightarrow 2$, or $3 \rightarrow 1$, where the "$\rightarrow$" symbol is read "implies" and refers to an association between the ordered item on the left side of the symbol and the ordered item or items on the right side of the symbol.

Specification, Page 12, Lines 10-24.

The Examiner's Answer states that:

B. The appellant stated that Lazarus does not disclose performing an analysis of the sequence of transaction to find association in the sequence of transaction in the session as recited in claim 1, 14, and 20.

According to Lazarus in column 3, lines 27-41, the transactions are grouped into the time interval sessions or other grouping parameters. Lazarus also discloses that learning the relationships between merchants in transaction data, and defining vectors, which represent the merchants. Identifies and captures the patterns of spending behavior (sequence of transaction data) is defined, col. 5, lines 15 25. For example, a new mother will likely shop at children's clothes, toy stores and others similar merchants, whereas a single young male will likely not shop at these types of merchant (col. 5, lines 31-35). In addition, Lazarus teaches that the co-occurrence windows (a number of transactions) are used to derive measures of how closely related any two merchants are based on their frequencies of co-occurrence of each other, col. 10, lines 51-64. Thus, this implies that the association of spending data in Lazarus is analyzed to find the co-occurrence buying pattern to predict further course of action, which is benefit to the merchant advertising processes. Therefore, Lazarus teaches the claimed limitation of "performing an analysis of the sessions of transaction to find association in the sequence of the transaction in

the sessions".

Examiner's Answer, page 10.

Applicant respectfully disagrees. First, applicants disagree that Lazarus, col. 5, lines 15 25, discusses "sequence of transaction data," as stated by the Examiner. The cited portion of Lazarus, states that "this aspect of the invention accurately identifies and captures the patterns of spending behavior which result in the co-occurrence of transactions at different merchants," which is finding patterns in shopping behavior (*e.g.,* "a new mother will likely shop at children's clothes, toy stores and others similar merchants, whereas a single young male will likely not shop at these types of merchant") which is not the same as determining associations in the **sequence** of the transactions (*e.g.,* what sequence of items did the new mother choose in the children's store), as the independent claims require.

Second, the Examiner's assertion that Lazarus "implies . . . that the association of spending data in Lazarus is analyzed to find the co-occurrence buying pattern to predict further course of action, which is benefit to the merchant advertising processes," also does not show a determination of the sequence of the transactions, as the independent claims require. In general, Applicant objects to any reliance on what a reference "implies" for the purposes of showing anticipation or obviousness. If the Examiner means to argue that some limitation is inherent in the reference, Applicant respectfully requests that the Examiner clearly make such a showing supported by evidence. In the absence of such a showing by the Examiner, the cited portions of Lazarus do not disclose determining associations in the sequence of the transactions as required by claims 1, 14, 20, and 24.

Each of the dependant claims 2-13, 15-19, 21-23, and 27 depend from one of claims 1, 14, 20, or 24 and include one of the limitations discussed above.

Anticipation can be established only when every element of the claim is disclosed by a single prior art reference. MPEP 2131; *RCA Corp. v. Applied Digital Data Systems, Inc*, 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984). The rejection of claims 1-4, 6, 14-20, and 22 under 35 USC 102(e) should be reversed because Lazarus does not disclose grouping the transactions into sessions.
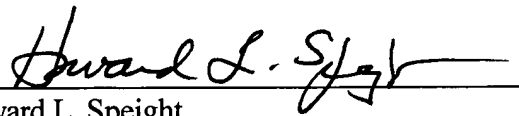
There is no prima facie case of obviousness where the asserted combination lacks at least one element. MPEP 2143; *In re Vaeck*, 947 F.2d 488, 493, 20 USPQ2d 1438, 1443 (Fed. Cir. 1991). The rejection of claims 5, 7-13, 23-24, and 26-27 under 103(a) should be reversed

because Lazarus does not disclose grouping the transactions into sessions.

Summary

The rejection of the pending claims should be reversed because none of the cited references, alone or in combination, disclose the elements required by the claims. Applicants do not believe any fees are necessary with the submitting of this Reply Brief. Should any fees be required, Applicants request that the fees be debited from deposit account number 14-0225.

Respectfully submitted,

Howard L. Speight
Reg. No. 37,733
Baker Botts L.L.P.
910 Louisiana
Houston, Texas 77002
Telephone: (713) 229-2057
Facsimile: (713) 229-2757
E.Mail: Howard.Speight@bakerbotts.com
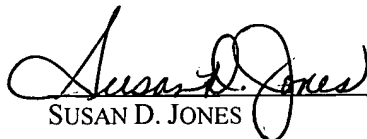ATTORNEY FOR APPLICANT

Date: September 14, 2005

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                          DIRECT TELEPHONE: 713.229.2057
                          DIRECT FACSIMILE: 713.229.2757
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